

EXHIBIT 21

Overdose Deaths in Cuyahoga County

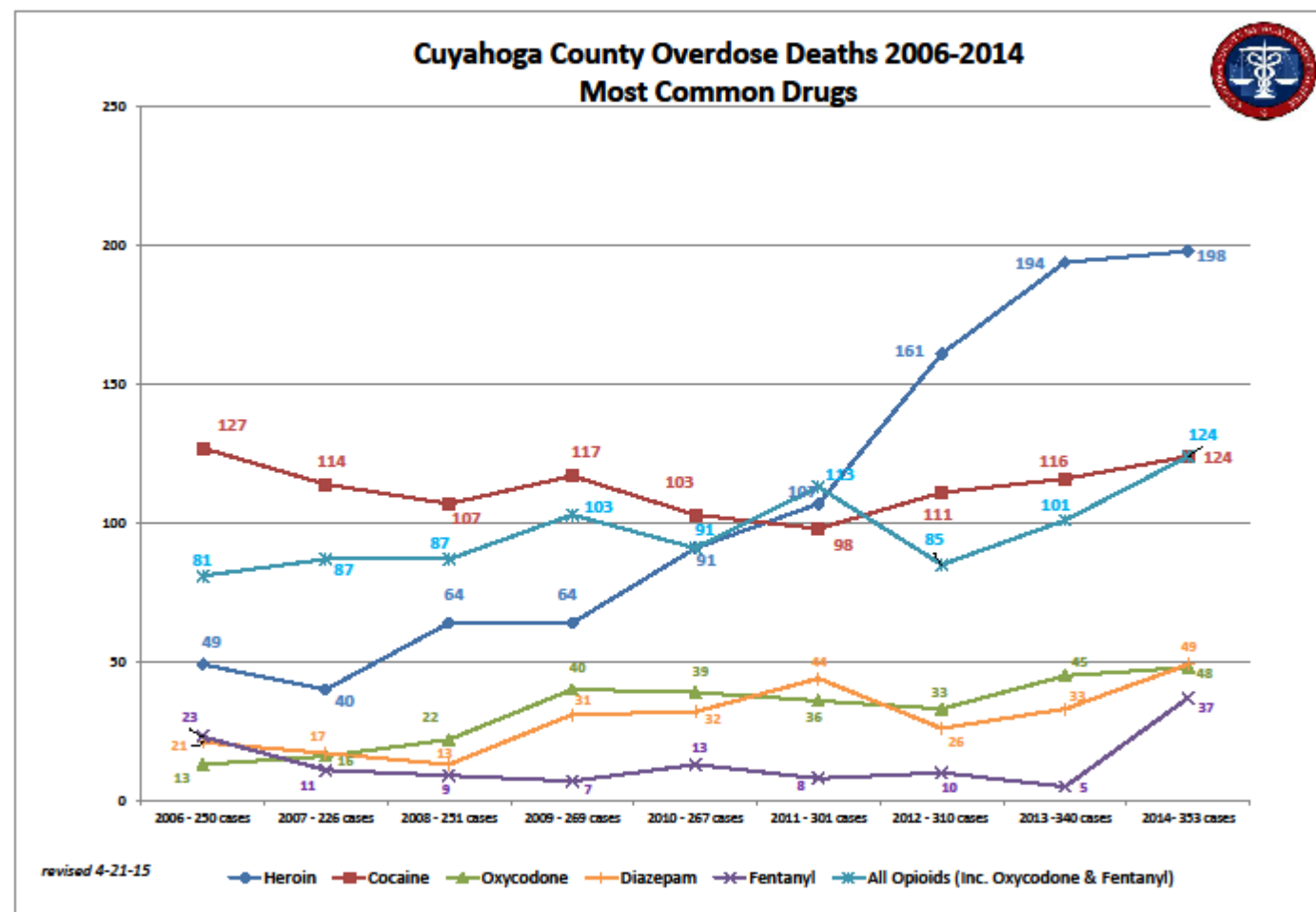
Thomas Gilson, M.D.

Cuyahoga County Medical Examiner

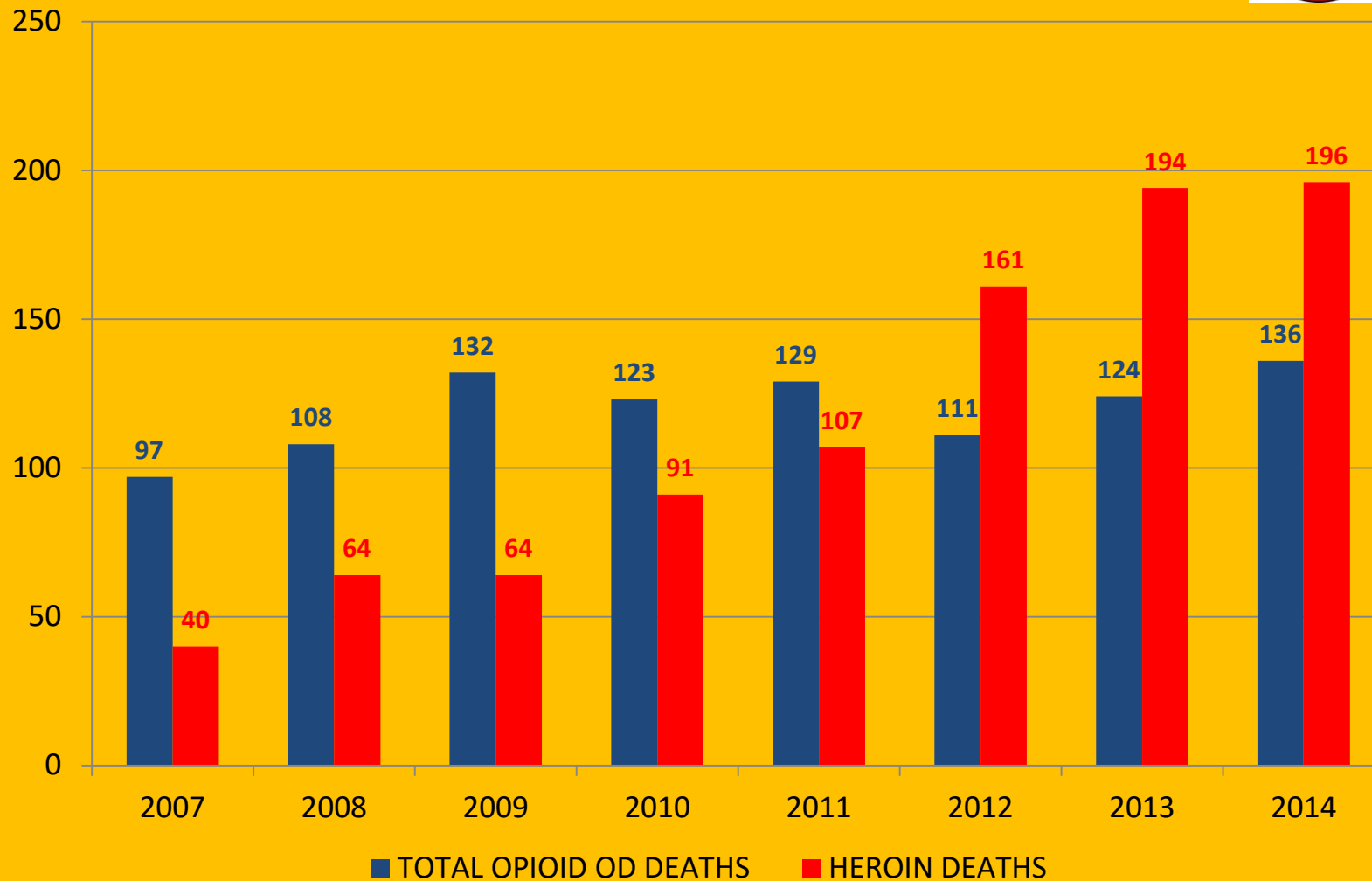
Objectives

- Review current and recent data on extent of opioid mortality
- Discuss the interplay of legal and illegal opioids in mortality

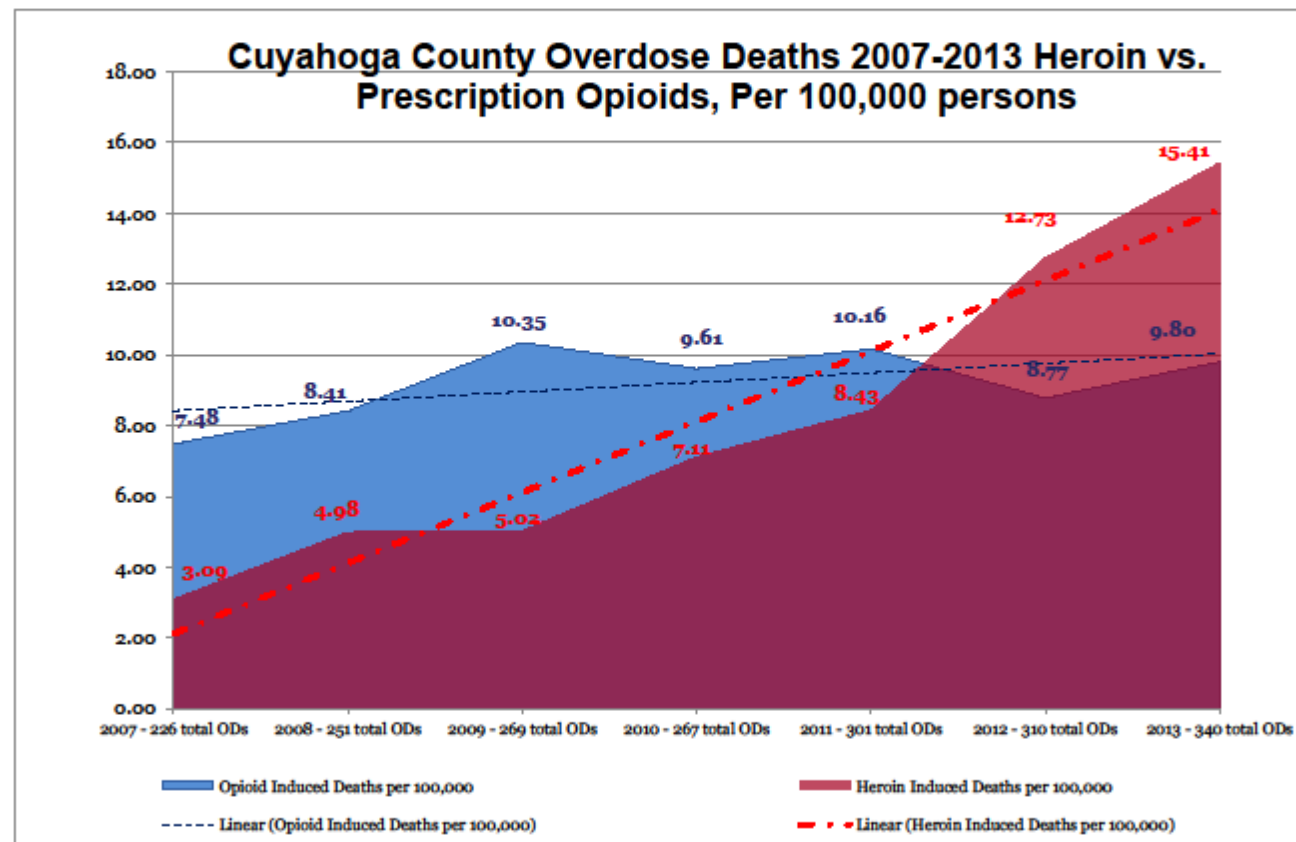
No conflicts to disclose



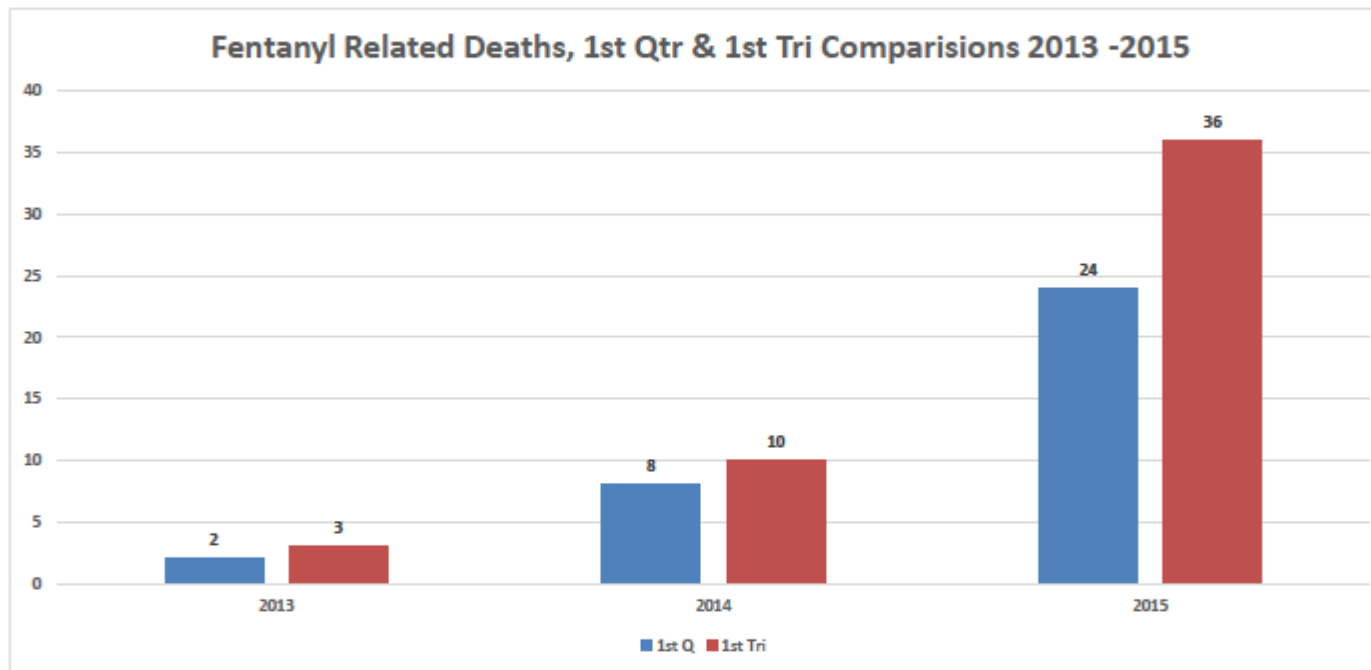
Comparing Opioid Overdose Deaths and Heroin Deaths in Cuyahoga County, 2007-2014



Source: Cuyahoga County Medical Examiner's Office February 11, 2015



Source: Cuyahoga County Medical Examiner's Office April 22, 2014



Heroin Epidemic

- 2012 retrospective review of heroin mortality conducted using ME data
- 2013 prospective review of heroin mortality done with ME staff, law enforcement, judicial representatives, medical/treatment physician, toxicologist and pharmacist (Poison Death Review Committee, PDR)

PDR Findings

- 194 heroin overdose fatalities(2013)
- (161 fatalities 2012)
- 95% of fatal heroin overdose victims known to abuse drugs (62% intravenous)
- 85% white
- 3:1 male to female ratio
- Most common age group 45-60; now followed closely by 30-44

PDR Findings

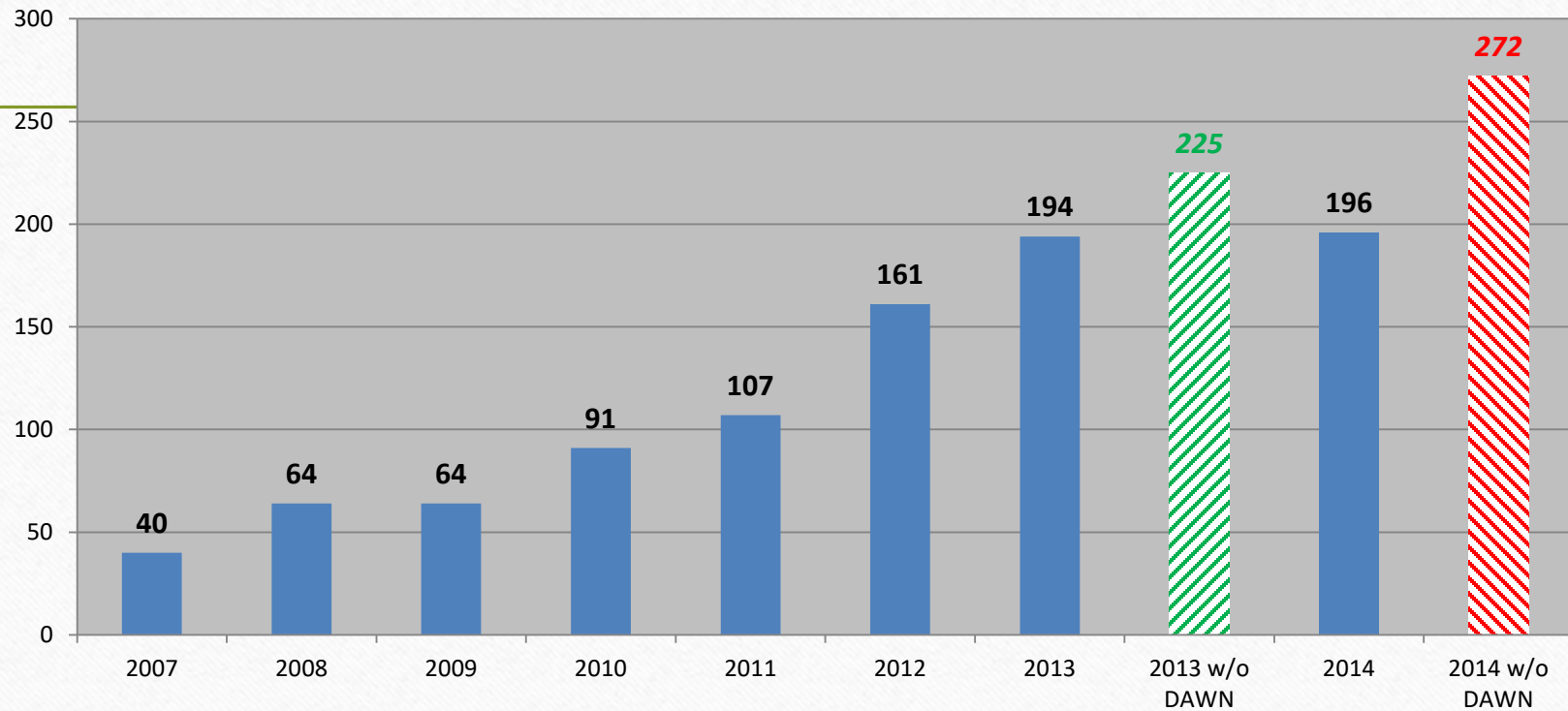
- ▶ Approximately 70% died in proximity to another person
 - ▶ 12% using drugs with others
 - ▶ 58% of bystanders not using drugs
- ▶ BUT only 25% received naloxone from EMS (EMS scene response was 98.5%)

Wider access to naloxone saves lives from heroin overdose (Project DAWN)

2013 – 31 documented reversals

2014- 76 reversals

Cuyahoga County Heroin Related Overdose Deaths 2007-2014; Projected with DAWN Saves



PDR Findings

- ▶ 73% of heroin overdose victims had a file with the Ohio Automated RX Registry System (OARRS)
- ▶ Meaning: within two years of death almost 3 of 4 heroin fatalities received a legal prescription for a controlled substance- most are narcotics or benzodiazepines

PDR Findings

- ▶ 36% of the heroin overdose victims fulfilled criteria for “doctor-shopping” in 2013
- ▶ Defined as 5 or more prescribers in one year
- ▶ OARRS look back period is only two years

A high percentage of fatal overdose victims are receiving legal prescriptions for narcotics in spite of a state prescription drug monitoring program